

details the results of some experiments made by him upon several points connected with the excretion of the urine.

The subject of this malformation was a boy of thirteen years of age. Immediately above the symphysis pubis, the abdominal parietes and anterior portion of the bladder were deficient to an extent of about three inches in an horizontal, by two in a vertical direction. The inner surface of the posterior aspect of the bladder protrudes through this opening, and forms a tumour about the size of half a large orange, which has a scarlet colour, is very sensitive to the touch, and is covered by a viscid glairy mucus, which has an alkaline reaction. The orifices of the ureters are seen at the under surface of the tumour on either side; they appear when closed to be small, irregularly oval depressions, about a line in diameter, situated on the summit of a conical papilla; a probe may be passed upwards in them for several inches without any sensible inconvenience.

The mechanism of the passage of the urine from the ureter to the bladder, as observed by Mr. Erichsen, was as follows: A drop collects within the papillary termination of the ureter, which becomes somewhat distended; the orifice of the canal then opens to an extent of from one to three lines, and as soon as the drop of urine passes, it contracts with a sphincter-like action. When the patient had not taken any food or drink for twelve or thirteen hours, each ureter opened on an average three times in a minute; the two ureters do not open at the same time, but with an irregular alternating action, and the action of the same ureter is sometimes very irregular. The effect of posture was very marked; when the patient lay upon his back the urine did not escape for a considerable time, and then dribbled out in a slow and gentle manner, without so distinct an opening and shutting of the orifices of the ureters as when in the upright position. On assuming the erect posture, after lying down for some time, the urine flows in a full stream, until the ureters have emptied themselves of the quantity that had collected in them. During a deep inspiration, as in yawning or coughing, or while straining at stool, the flow of urine is suddenly increased, and it then escapes in a small stream, or in several large drops, in rapid succession. The urine was invariably acid.

In order to determine the length of time which intervenes between the introduction of certain substances into the stomach and their appearance in the urine, (as this was a very favourable subject for such an inquiry,) Mr. Erichsen administered several drugs which are readily detected by appropriate tests, as the ferrocyanuret of potash, infusion of galls, rhubarb, madder, uva ursi, and logwood, the citrates of soda and potash, the tartrate of soda, and the acetate of potash. The experiments with prussiate of potash, infusion of galls, and uva ursi, were made by receiving the urine as it dropped from the ureter into a vessel containing a solution of persulphate of iron; with rhubarb, into a dilute solution of potash; and those with citrates, tartrates, and acetates of potash, by testing the urine at regular intervals with litmus or turmeric paper.

Mr. Erichsen gives the details of ten experiments with the prussiate of potash, and adds a tabular view, showing the quantity taken of the salt, the period which intervened before it made its appearance in the urine, &c., &c. The dose never exceeded forty grains, nor was below twenty; the earliest period at which it was detected in the urine was about one minute after being swallowed, and the longest thirty-nine minutes: this difference appeared to depend upon the presence or absence of food in the stomach at the time; when the stomach was empty, the salt was detected in from one to two and a half minutes, whereas soon after a meal it required periods varying from six and a half to thirty-nine minutes.—*Dublin Medical Press*, July 9, 1845.

3. *Negative Influence of the Cerebro-Spinal fluid on Locomotion.*—M. LONGET communicated to the French Academy of Sciences, June 16th last, a notice of some experiments relative to the abstraction of the cerebro-spinal liquid and the influence of the posterior cervical muscles on locomotion, by which he proposed to point out an error and to establish a fact. It is generally admitted by physiologists for twenty years past, that the evacuation of the cerebro-spinal fluid disturbs locomotion very remarkably. The method pursued to evacuate the cerebro-spinal liquid has been to open the dura mater and the arachnoid, between the occipital

bone and the atlas, after having divided the soft parts covering the occipito-atloid space. When the liquid is evacuated, and the animal is let loose, it staggers, it is said, as though it were intoxicated. M. Longet divided the soft parts down to the occipito-atloid ligament, which latter structure was left intact, *and consequently without evacuating the cerebro-spinal fluid*, in the horse, the dog, and the rabbit, the animals were placed in the horizontal position, and to M. Longet's astonishment, he observed precisely the same disturbance of the functions of locomotion, the same unsteadiness in walking which had hitherto been always attributed to the abstraction of the cerebro-spinal fluid. A counter experiment, by evacuating the cerebro-spinal fluid without dividing the muscular and ligamentous tissues of the back of the neck, was necessary to test this result. M. Longet removed one of the vertebral laminae in the middle of the dorsal region. After the operation there was some weakness in the posterior extremities, in consequence of the muscular wound, but this weakness was in no degree increased by the evacuation of the fluid, and moreover the animals did not present any of the peculiar and very characteristic staggering observed in the other series of experiments in which the soft parts of the back of the neck were divided.

M. Longet concludes from these experiments—1. That an important influence over the functions of locomotion has been erroneously attributed to the cerebro-spinal fluid, which, in point of fact, exerts no such influence. 2. That the division of the muscles and ligamentous tissues of the nucha causes animals to stagger as though they were drunk; and that the effects attributed by previous experimenters to the abstraction of the cerebro-spinal fluid arose from the division of those parts.—*Gaz. Méd. de Paris.*

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4. *Cases of Congenital Fissure in the Neck.*—Prof. ALLEN THOMSON read to the *Medico-Chirurgical Society of Edinburgh* (July 8, 1845), a notice of three cases of congenital fissure in the side of the neck, of the same nature as those described by Dr. Aschersohn of Berlin, in his *Inaugural Dissertation*, published in 1832.

Dr. Thomson began his communication with an account of the general results of Aschersohn's observations on eleven cases, and an explanation of the manner in which that author, and after him, embryologists in general, have referred the congenital fissures in question, to the abnormal patency of one or more of the bronchial clefts discovered in the vertebrate embryo by Rathk, in 1825.

Dr. Thomson then detailed the history of the three cases which had come to his knowledge in Edinburgh. Of these cases, one had been observed by himself, five years ago, along with Professor Syme and Dr. Thomas Fairbairn; a second was now under treatment for the affection by Dr. Gairdner, President of the Society; and a third had been casually noticed by Dr. James Duncan.

The first of these cases now referred to is that of a young man of seventeen, now residing in Edinburgh, presenting a marked example of the fissure on the right side of the neck. The external aperture of the fissure is situated in the skin covering the anterior border of the sterno-mastoid muscle, and about midway between the jaw and clavicle. A common surgeon's probe may be passed about half an inch into the fissure; but a thinner probe runs, without more than the slightest possible force being applied, to the distance of nearly two inches in a direction upwards below the skin, platysma myoides, and fascia, towards the pharynx or great cornu of the hyoid bone.

Four years ago, when the case was first carefully observed, the probe was passed very easily to the depth of two and a-half inches in the same direction. Upon one occasion, when the probe was passed the length now stated, the young man thought he felt matter pass into the throat; and upon all occasions, when the probe is passed to a considerable depth, a tickling cough follows—circumstances which, as in some of Aschersohn's cases, lead to the view, that the fissure is connected with the pharynx. It may also be mentioned, that on pinching up the skin near the external aperture with the fingers, a cord-like prolongation is felt in the direction in which the probe passes; and that when the lad swallows, the skin immediately surrounding the external aperture is drawn up and slightly puckered.

The external aperture is frequently closed by a scale or scab; but at other times, a glairy fluid exudes from it, and a long gelatinous thread may occasionally be pressed out of the fissure.